# ANALYSIS OF DIMENSIONS OF TEMPERAMENT AMONG SPORTSMEN AND NON SPORTSMEN STUDYING IN UNDERGRADUATE COURSES IN BANGALORE UNIVERSITY

A SYNPOSIS (RESEARCH PROPOSAL) SUBMITTED TO

SWAMI RAMANAND TEERTH MARATHAWADA UNIVERSITY NANDED

FOR FULFILLMENT OF THE Ph.D.IN

PHYSICAL EDUCATION

BY

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June 1, 2016

# Chapter – I

# INTRODUCTION

## 1.1 INTRODUCTION

The nature of competing through sports has been part of human existence since time immemorial, sports has been a major force in determining the personality of people involving in it, sports with its nature of providing abundant opportunity for development of various physical, psychological and sociological traits in an individual. Since sports bestow many benefits on its participants, there comes the need to test the difference between a person participating in sports and person non participating in sports. Competing in sports as on today is highly specialized, every aspect of sports persons worked upon to bring out his best performance, no traits of his personality is untouched to make him deliver his best. Today moulding a sportsperson is highly complicated process and people involving in this job must have an multi-dimensional approach among various other factors all components of psychology of a sportsmen for influences his personality which in turn has a considerable influence on his performance. Hence, any study related to the personality or psychological aspects of a sportsperson is always valuable and welcome as these studies empowers the people involved in training the sportsmen with more vigilance and intelligence. Overall, though the present study is an effort made to bring following two aspects into light.

a) Influence of dimensions of temperament on the performance of a sportsmen.

b) Differences that exists in dimensions of temperament among those participating in sports for a pre-considered period of time and those not participating in any sort of sports activities.

Every individual's personality has different dimensions and temperament it also considered as one among the important dimensions determining the personality of an individual. Temperament can be state as one of many traits that can be formed in a person.

Allport (1961) defined temperament as "Temperament refers to the characteristic phenomena of an individual's nature including his susceptibility to emotional situation, his customary strength mood, and all the peculiarities of fluctuation and intensity of mood, these being phenomena regarded as dependent on constitutional make up, and therefore largely heredity in origin" "Hilgard and Atkinson (1952) defined temperament as the aspect of personality revealed in the tendency to experience to mood changes in characteristic ways. It is the general level of 'Reactivity and Energy'.\

Lindergren (1956) defined temperament as the general emotional responsiveness of the individual.

Temperament comprises many psychological traits which determine the performance of a sportsperson on the field to a considerable level and his behavior both on field and off field. With the exposure to various on field situations influencing the total behavior and personality if a sportsmen, they are bound to have better dimensions of temperament in general. These dimensions of temperament have been classified under different terms by various psychiatrists and experimentalists few of which can be stated as-dullness, alertness, gentleness, sympathy, apathy, emotionality, restlessness, sociability, ascendance, secretiveness, reflectiveness, impulsivity, placid, accepting, responsible, vigorous, co-operative, persistence, warmth, aggressiveness, tolerance, tough mindedness and many others. These temperaments determine the personality and outlook of any individual. The temperament of any individual

is basically molded by an individual's experiences with his environment and they differ from person to person. From various previous studies it is evident that temperament among sportsperson is different from that of people not participating in sports, thus any study with regard to this is at most welcome by not only the sports fraternity but also by any educationists and people designing the curriculum.

In present research proposal effort is made to bring out the difference in the various traits of temperament among the sportsperson and non-sportsperson. The subjects will be selected as sportsperson in the present study will be participants in state level, national level and international level competitions in any of the A. I. U (All India University board) listed games. The non-sports persons for the present study will be those who never participated in any of the competitive sports at any point of their life.

## 1.2 STATEMENT OF THE PROBLEM:-

Temperament comprises many psychological traits which determine the performance of a sportsperson on the field to a considerable level and his behavior both on field and off field. With the exposure to various on field situations influencing the total behavior and personality if a sportsmen, they are bound to have better dimensions of temperament in general.

Every individual's personality has different dimensions and temperament is also considered as one among the important dimensions determining the personality of an individual.

The Researcher made an effort to bring out the difference in the various traits of temperament among the sportsperson and non-sportsperson. Hence he selected the Topic of "*ANALYSIS OF DIMENSIONS OF TEMPERAMENT AMONG SPORTSMEN AND NON SPORTSMEN STUDYING IN UNDERGRADUATE COURSES IN BANGALORE UNIVERSITY"* for the research study.

## 1.3 THE OBJECTIVES OF THE STUDY

- To Analyze Temperament of Sportsmen and non-sportsmen's in general.
- To establish that sports facilitate development of temperament traits in individual.
- To enlighten people that participation in sports contribute for the development of personality among students.
- To enlighten authorities to facilitate more and more opportunities for students to compulsorily participate in intramurals and extramural sports activities.
- To enforce compulsory inclusion of sports in under graduate curriculum.

## 1.4 HYPOTHESIS:-

**$H_1$** : It is hypothesized that there exists difference among the selected components of temperament between sportsmen and non sportsmen studying in undergraduate courses in Bangalore University

**$H_2$** It is hypothesized that Sportsmen studying in under graduation had better dimensions of temperament than the non-sportsmen in Bangalore University.

**$H_3$** It is hypothesized that there exists significance difference as per the Z-test at 0.05 level of significance in dimensions of temperament among combative and non combative sports person.

**$H_4$** It is hypothesized that sportsmen have significantly better dimensions of temperament than the non sportsmen studying in undergraduate courses in Bangalore University.

**$H_5$** It is hypothesized that participation in sports at various competitions has a positive influence in shaping ideal dimensions of temperament among the students.

## 1.5 LIMITATIONS OF THE STUDY

- There are hundreds of dimensions of temperament identified under different names, all the dimensions will not be tested in the present study. Only 15 dimensions of temperament selected in the 'manual for dimensions of temperament scale (DTS) will be tested in the present study which is one of the limitations.
- The life experiences and background influencing the Dimension of Temperament of the subjects will not taken into consideration, which is also consider as a limitation of the present study.
- The answers given by the subjects selected will be considered as truthful and no steps will be taken to assess the truthfulness of the answers given by the selected subjects.
- However, all students representing Inter college, inter university, state, nationals, and international sports and games event of various affiliated colleges of Bangalore University will be selected randomly for the study. had equal chances of becoming the subjects of the research study.
- Samples from selected under graduate colleges in Bangalore University will be selected randomly as the subjects in non sportsmen group. One college in each zone will be selected and limited samples from these colleges are selected randomly which also is considered as one of the limitations of the present study.

## 1.6 DELIMITATION:

- ❖ The study is delimited to 500 sportsmen and 500 non-sportsmen studying in undergraduate courses in Bangalore University.
- ❖ Only male students will be selected as subjects for the sportsmen and non-sportsmen category for the present study.
- ❖ Only sports persons participating in inter college, inter University/ all India University, state, nationals and international sports and games competitions will be considered as subjects for the research study.
- ❖ Subject selected as sample for the sportsmen group had to be professionally practicing the particular game, sports event.
- ❖ To evaluate the dimension of temperament 15 traits from Dimension of Temperament scale designed by Dr. N. K. Chadha and Miss Sunanda chandna will be selected, which is stated as follows:

1. Sociability
2. Ascendance
3. Secretiveness
4. Reflective
5. Impulsivity
6. Placid
7. Accepting
8. Responsible
9. Vigorous
10. Co-operative
11. Persistence
12. Warmth
13. Aggressiveness
14. Tolerance and
15. Tough minded

## 1.7 SIGNIFICANCE OF THE STUDY:

1) The study would help to identify the difference in selected Dimension of Temperamental traits among the sportsmen and non-sportsmen in general.

2) The study would lead to the self-assessment of the sportsmen regarding their Temperamental trait helping them to improve over the lacunas and improve on their performances.

3) The result of the study would not only help the sports personnel's (P.E.D.)working in colleges, coaches, physical educationist and parents to assess the prevailing status Dimensions of temperament among the sportsman and non sportsmen but would also assist in framing up programs necessary to improve the Dimensions of Temperament among the selected group of sportsman and non sportsmen.

4) The study helps us to analyze the various reasons for the existing differences of selected temperamental traits among the sportsmen and non-sports men.

5) The study would provide a platform to discuss if there existed any influence of the event/ sports, the sportsmen were involved upon the selected traits of temperament, which in turn would educate people and help them encourage children to participate in sports activities.

6) The study would also lead us to understand and pave way to understand and handle various psychological issues faced by the students in general.

7) The study also emphasizes the importance and role of sports in developing the ideal personality among the individuals as expected by the society in general.

## 1.8 DEFINITION OF TERMS:

**Temperament**

Temperament is individual difference in emotional, motor, and attentioanal reactivity measured by recovery of response, and self regulation process such as effortful control and modulate reactivity

**Sociability**

The term sociability can be defined as the relative tendency of an individual to be sociable or the ability to associate oneself with other fellows.

**Ascendance**

Ascendance can be defined as when the ability of a person or group to establish power over the other

**Secretiveness**

Secretiveness can be stated as the character of an individual lacking openness or the ability to hide ones action and purpose of performing an action.

**Reflectiveness**

Reflectiveness reflects the character of deep thinking and being seriously thoughtful.

**Placid**

Placid refers to the character of being undisturbed by heavy thoughts and experiences placed by life

**Accepting**

Accepting refers to indisputably agree upon. It refers to ability of tolerating and going along without protest.

**Responsibility**

Responsibility is characterized of being accountable at given point of time, situation or deal.

**Vigorous**

Vigorous can be defined as character of an individual to express himself energetically in any given situation. It is the capacity of an individual to stay energetic

**Cooperation**

Cooperation can be defined as the ability to get along with others to accomplish a given task.

**Persistence**

Persistence is the ability to endure or to stick on.

**Warmth**

Warmth can be defined as the comfort felt in an individual's presence or company.

**Aggressiveness**

Aggressiveness- positively can be defined as the quality of being bold and enterprising.

**Tolerance**

Tolerance is the capacity or the power to sustain and get along with unfavorable conditions.

**Tough-minded**

Tough-minded can be referred to the ability to face situations or difficulties being realistic.

**Sports person**

Sports person in the present study were to be participants in state level, national level and international level competitions in any of the A. I. U (All India University board) listed games.

**Non sports person**

The non sports persons for the present study were those who never participated in any of the competitive sports at any point of their life.

## Chapter – II

## REVIEW OF THE RELATED LITRATURE

The researcher reviewed the available literature, which are relevant studies, facts and findings related to his selected problem. The major source from which the author was able to collect the required literature is confined to Libraries of Bangalore University, Library of University College of Physical Education, Department of Psychology, Inflibnet and Internet. The following are some of the literature available for the further research work, which forms to be the foundation of the study.

In a study done by Dough H. Han the researchers decided to study the influence of temperament and anxiety on athletic performance the temperamental traits of Harm Avoidance (HA), Novelty Seeking (NS), Reward Dependence (RD) and Persistence. Those four factors have temperamental characters which are genetically independent from one another, moderately heritable, and stable across time Study participants were 277 athletes and 152 non-athletes who were all boys at high schools (mean age = 17.36 ± 2.99).

RESULTS

Demographic characteristics **t**here were no significant differences of demographic variables between the athletes and non athletes with regard to age, duration of participating in sports, and frequency of being a winner. TCI characteristics in athletes Harm Avoidance score of athletes was higher than that of non-athletes while there were no differences in other temperaments between groups (18.2 ± 5.9 and 16.7 ± 5.9, respectively). Endurance sports showed highest Novelty Seeking (23.0 ± 3.7) and lowest Persistence score (3.2 ± 1.6) among four types of sports (endurance, power/combat, power/individual, and team sports). Specifically, Taekwondo players (17.1 ± 3.1) were lowest and throwers (24.2 ±

6.4) were highest in Novelty Seeking. Long distance runners (3.2 ± 1.6) were lowest and Cerium (6.0 ± 0.7) players were highest for Persistence (Table 2). Golfers (14.7 ± 6.3) were lowest and swimmers (21.7 ± 3.9) were highest in Harm Avoidance.

CONCLUSION

Temperamental patterns of athletes have influences on the anxiety level and athletic performances.

A study was conducted by David Matsumoto to study sport Psychology among Combat Sports. The study was basically done to understand basic psychological principles concerning stress, coping, emotion, and emotion regulation, and their impact and influence on combat sports such as judo. Discuss the psychological issues related to motivation and competition stress in the one combat sport that we know best, judo. We all bring our experiences in competitive judo to bear on the issues we introduce in this chapter1, and blend them with the psychological research literature providing a pragmatic approach to the topics discussed. We do not focus on the many psychological benefits of the practice of the combat arts.

CONCLUSION

This chapter did not focus on the many psychological benefits of the practice of the combat arts. Instead, we wrote this chapter was not written from the perspective of professional sport psychologists, but as former coaches and athletes in high-level competition who also have a background in psychology. Thus many of the guidelines we provided and examples we used come not from time-tested research, but from our experience, and from the application of basic psychological principles to the areas of our experience in which we believe they are most important. We feel that a lack of focus on athlete's emotions, especially in the heat of

battle in high-stress, high-intensity combat sports, often renders discussions of sport psychological principles and practices irrelevant to many practitioners. We hope that we have bridged that gap, by understanding exactly that high-intensity, high-stress situation from an emotional and psychological standpoint. Hopefully, future research can test many of these ideas to determine their scientific worthiness. Undoubtedly, the results of those studies may change some of the guiding principles we offered, and/or offer modifications to the specific ways in which those principles can be put into practice. Regardless, we welcome such scientific efforts, and an expanded discourse about these issues among coaches and athletes involved in training for high-level competition. These activities can only help to introduce another element of humanity into this tough, and sometimes brutal, world.

In their study the researchers **Joanna Burdzicka** (2014) and others analyzed the selected personality traits of women training combat sports. Women training wrestling, taekwondo, judo and boxing were subjected to analyses. Called “the weaker sex”, women mark their presence in stereotypically masculine sports and achieve success not infrequently at the cost of their health . They have to break conventions meeting the requirements of competition, dominance and endurance. They also have to allow for shortening the distance and entering an intimate sphere through bodily contact during a fight and conform to masculine behaviors In order to explain problems bothering scientists, 5 tools commonly used in psychology were used. These included: 1. Psychological Gender Inventory by Alicja Kuczyñska. This method makes it possible to define one of four types of psychological gender. The Inventory includes 35 items, 15 of which describe stereotypical femininity (femininity scale), 15 – stereotypical

masculinity (masculinity scale) and 5 – neutral statements which refer to women and men equally. The Inventory includes instructions according to which the respondent marks to what extent the statement refers to her. Answers should be selected from among 5 options beginning from 'I'm not like that at all' to (5) 'I'm exactly like that'. 2. The Temperament Questionnaire is used in scientific and clinical research as well as in professional and educational coaching. The Questionnaire includes 120 statements referring to 6 aspects of temperament, i.e. emotional reactivity, activeness, endurance and sensory sensitivity connected with the level of energetic behavior as well as alertness and perseveration connected with the time description. The norms for the Questionnaire are presented in the 9-level stanine scale. 3. The Eysenck's Personality Questionnaire – EPQ-R, assessing basic personality traits of a person (Extraversion, Neuroticism, Psychoticism, with an additional Lie scale). It is one of the most popular methods used by psychologists. This tool is mainly used for scientific and group research. It includes 100 statements, where 24 refer to Neuroticism, 23 to Extraversion, 32 to Psychoticism and 21 refer to the Lie scale. Answers are given on a separate sheet where a respondent marks answers to particular statements . 4. The Creative Behavior Questionnaire by Stanis³aw Popek.

The questionnaire includes 60 statements referring to various behaviors of a person while learning or during a different activity. The respondent has to reply to every statement marking one of the three possible answers with "+". Marking point 2 with "+" means the respondent's agreement with the statement, marking point 1 means partial agreement with the statement, while marking point 0 means disagreement with the statement. The study makes it possible to calculate results for four scales: C – conformism, N –

non-conformism, A – algorithmic behaviours and H – heuristic behaviours. The sum of the results of C and A scales provides information concerning a person's reproductive attitude, while the sum of the results of N and H

Scales – a person's creative attitude. 5. A questionnaire prepared by the authors making it possible to collect basic data of the respondents.

The research results were analyzed statistically with the use of IBM Statistics SPSS 20.0 PL software. In order to compare the two groups, the non-parametric Mann-Whitney U test was used due to the lack of normal distribution of the majority of variables. Research prove that regardless of the character of the activity undertaken by women, androgenic individuals are a dominating group (61% in the group training combat sports and 46% among those who do not train any sports). The smallest percentage is constituted by individuals whose psychological gender is not defined (5% in the first group and 9% in the second group). Differences between the respondents were noted in the remaining two models of psychological gender. Among women who are not active in sports the second biggest group is constituted by feminine women (40%), while among athletes – by masculine women (22%). In order to compare

The distribution of proportions of particular types of psychological gender, a chi-square test was applied. As a result of the comparison between the percentages of particular types in the group of female athletes and percentages in the other group, it turned out that the distributions are not compliant (chi-square= 67.098; $p<0.001$).

CONCLUSIONS

The analysis of the material showed that female athletes training judo, boxing, wrestling and taekwondo contest traditional femininity since they have more personality traits stereotypically attributed to men (high level of masculinity). Scientists perceive high psychoticism of the athletes as a tendency to break conventions. As highly non-conformist individuals, they do not conform to social pressure and live according to their own system of values training sports which are stereotypically treated as masculine. Masculine activity is an attempt at overcoming a stereotypical attitude to women in sports activity. Training combat sports gives them a chance to gain new skills and ways of dealing with stress and difficulties, which are fundamental for well-being. It also teaches how to release negative energy and provides rich experiences used by women not only in sports activity. Combat sports are trained by women with low emotional and sensory sensitivity; however, it gives them advantage in sports competition.

In the two studies conducted by Marjorie Bernier, Emilie Thienot, Romain Codron,(2009) and Jean F. Fournier effort was made to Mindfulness and Acceptance Approaches in Sport Performance. The two studies included herein discuss mindfulness and acceptance in sport performance. Based on exploratory interviews with elite swimmers, Study 1 showed that optimal performance, or "flow," states reveal similar characteristics to mindfulness and acceptance states. In flow experiences, the elite swimmers described that they had been particularly mindful of their bodily sensations and accepted them. In Study 2, mindfulness and acceptance were integrated into a psychological skills training program for seven young elite golfers. The program, based on mindfulness and acceptance, contributed to performance enhancement in competition. Participants improved the efficacy of their routines by seeking more relevant internal and external

information. The results of both studies corroborated those of previous studies dealing with mindfulness and acceptance in sport. Together, these studies enhance the applicability and efficacy of these approaches with athletic clientele.

## General discussion and conclusion

The goal of these two studies was to examine the link between mindfulness and acceptance approaches and sport performance. Study 1 emphasized the link between flow experience and mindfulness and acceptance states. Some elements of the optimal performance state are comparable to those of the mindfulness and acceptance state. In flow experiences, elite swimmers described that they had been particularly mindful of their bodily sensations and tended to accept them. This characteristic, which seems to reflect a mindfulness and acceptance state, is not clearly described in the nine conceptual dimensions defined by Jackson and Csikszentmihalyi (1999). Future research should further explore the conceptual differences and similarities between flow and mindfulness. In Study 2, mindfulness and acceptance were combined in a psychological skills training program for golfers. Training based on mindfulness and acceptance proved to be effective for enhancing performance during competition for young golfers. The program enabled them to anticipate and adapt their game in a clear-sighted fashion. They improved the efficiency of their routines by seeking more relevant information. Results of the two studies corroborated those of previous studies dealing with mindfulness and acceptance in sport (Gardner & Moore, 2004, 2006, 2007; Kee & Wang, 2008). Moreover, this recent research theme in sport psychology shows that mindfulness and acceptance have effects other than simply therapeutic ones, as these skills can be also used for athletic performance enhancement. These

approaches, belonging to the third wave of cognitive-behavioral psychology, call into question the singular use of traditional second-wave cognitive-behavioral sport psychology practices that focus of changing or modifying cognitive and affective states. Sport psychology and performance enhancement interventions have for the most part been based on the second wave of cognitive-behavioral approaches, in 330 Bernier et al. which cognitions play a central role (Hayes, Strosahl, & Wilson, 1999). The principle of these traditional methods in sport psychology (as in information processing models, generally) is to detect irrational or ineffective thoughts and to correct them. For example, until now, the awareness skill has been developed as a basis for psychological interventions for performance enhancement. *Awareness* consists of identifying one's emotional states, arousal level, cognitions, and attentional focus to adjust them. This concept is in one way close to the mindfulness concept, in that it considers both the necessity for an athlete to be lucid and aware of his or her internal states and external cues to achieve greater performance levels. However, mindfulness and acceptance approaches differ from awareness (at least as awareness has been presented in sport psychology; see Ravizza, 2001 for a discussion on awareness) in that mindfulness and acceptance approaches *do not* seek to control or to change cognitive content. On the contrary, the goal of this third wave approach is to teach athletes to accept their cognitions, emotions, and sensations and to commit themselves to action, rather than fighting against negative thoughts and unpleasant emotions. The difference between awareness, defined by Ravizza as "the recognition of the need to do something to gain control" (2001, p. 171) and mindfulness and acceptance approaches, whose aim is quite the opposite of controlling one's internal state, clearly illustrates the evolution of the principles from the second to the

third wave of cognitive-behavioral approaches. This has recently led a handful of researchers and practitioners to reconsider current trends in sport psychology. While the traditional methods may still be useful, they may need to be adapted or adjusted by taking into consideration the new principles of the third wave of cognitive behavioral approaches in mainstream psychology. More research is needed to gain a better understanding of these approaches and to further confirm their applicability and their efficacy in sport psychology. New investigations should continue to examine mindfulness and acceptance approaches in a variety of sports, as mindfulness and acceptance may require different applications according to the sport in which they are studied and applied. The studies presented here have observed different manifestations and effects of the mindfulness and acceptance process in golf and in swimming. In swimming, mindfulness seemed to help athletes become aware of bodily sensations perceived before the start of the race. In golf, mindfulness and acceptance interventions affected tactical sub components of performance. Indeed, mindfulness and acceptance appeared to help the golfers make correct tactical decisions by scanning relevant information coming from internal states (arousal level, emotions) and from the environment (target, potential trajectory of the ball). However, mindfulness and acceptance may present different advantages for different sports, depending on the main subcomponents of performance. In different sports, the optimal performance state displays specific characteristics (i.e., physical, technical, tactical). Thus, it is important to study how mindfulness and acceptance could specifically contribute to the attainment of optimal performance states in various sport contexts. Interventions must continue to be studied and evolve with emerging data. To

date, only two programs have been presented in the literature: the manualized

Mindfulness-Acceptance-Commitment (MAC) intervention (Gardner & Moore (2004, 2006, 2007), which has garnered initial empirical standing, and the similar program presented in Study 2 of this article. Improvement of the present program implemented with young golfers may include simplification, more sequences, The Effects of Mindfulness and Acceptance **331** and perhaps a shorter duration. New studies should be conducted to enhance our understanding of mindfulness and acceptance in sport, to further confirm the effectiveness of interventions based on mindfulness and acceptance, and to specify how these interventions can be implemented in training athletes at various levels of expertise and across sports.

**Gupta and Banga** (1976) studied extroversion, neuroticism and physical fitness. One hundred male students of four personality tests as distinguished by "Maudsley Personality Inventory" of Eysenck, belonging to the same age and academic achievement groups were tested to determine the difference of physical fitness as measured by the modified form of "Harvard Step Test" among the personality types. Results indicated that a extrovert group was significantly the highest on physical fitness as compared to all other groups; b. neurotics group was significantly the lower on physical fitness than all other personality groups; c. no significant different was found between extrovert group and normal group; and in the majority of comparisons made in this investigation, significant differences of fitness among the personality types had been found.

**Barinder** (1983) conducted "a study of general anxiety and test anxiety with reference to the environmental factors and

extroversion-introversion of Delhi students". The sample of the study consisted of 200 college – going students (100 boys and 100 girls) of Delhi University in the age group of 20-25. The subjects were selected at random, irrespective of the course. The tools used for collecting data were. The Dutt Personality Inventory, the Socio – economic status Scale, the Self Prepared Test Anxiety Inventory and the Maudsley personality Inventory. The data were analyzed with the help of ANOVA supplemented by the t-test. There was no significant difference between very high socio-economic status extrovert girls and between high socio – economic status introvert girls. There was a significant difference between average socio – economic status extrovert girls and average socio – economic status introvert girls on general anxiety.

Greene, Ralph, E, Houston, B Kent, Holleran, Shron examined relations between aggressiveness and dominance and (1) particular developmental experiences and (2) total serum cholesterol (TSC) in 94 college men. Aggressiveness but not dominance was found to be positively related to Ss'. For low-physically fit Ss, both aggressiveness and dominance were found to be positively related to levels of TSC. For high-physically-fit Ss associations were not found between TSC and either aggressiveness or dominance. Results suggest that good physical fitness may the degree to which either aggressiveness or dominance may adversely affect health via elevated levels of cholesterol.

Kenneth Tillman found a relationship between physical fitness and selected personality traits. In the first phase of this study, 386 junior and senior high school boys underwent a physical fitness test. The instruments used in this study were: AAPHER Youth Fitness Test for assessing the fitness level of the selected groups and the personality tests. The personality tests used in this study

were the A.S. Reaction study of Allport, Cattell's Sixteen Personality Factor Questionnaire, and the Kuder Preference Record form C. In the second phase of the study, the low physical fitness group was divided into a control and an experimental group resulted in a significant gain in physical fitness. When compared with the control group changes during the experimental period, the experimental group personality trait changes were found to be significantly different on only one test item. The first portion of this study investigated the differences in personality traits of physically fit high school boys and also the boys in a low state of physical fitness. The second phase consisted of setting up an experimental and control group using the boys who ranked low on the closer physical fitness tests. The experimental group members were then compared with the control group subjects on the personality tests after they had completed a nine month physical fitness program.

After duly studying the selected available literature, the researcher was familiarized with the knowledge of how to collect the data, how to standardize the collected data, the tools and statistical device that may be adopted for the study, infact the review of the related literature provided the base for all further research process of the researcher.

# Chapter – III

# METHODOLOGY

The Methodology of the present study is as per the survey method. The various steps followed in the Methodology are as follows:

1. Selection of samples.
2. Selection of parameters.
3. Orientation of the subject.
4. Administration of questionnaire.
5. Collection of the data.
6. Statistical analysis and interpretation of the data.

**1. Selection of subjects:**

The study aimed at analyzing dimensions of Temperamental. For this purpose 500 under graduate students studying in colleges affiliated to the Bangalore University Bangalore Karnataka State who has represented at least one among the following: Inter College, Inter University, State and/or India level sports / games competition. Who were within the age group of 18 to 28 years in any of the sports listed by the AIU were selected as one group. The other group comprised of students who did not participate in any of the sports events at competitions and were students of under graduate colleges of Bangalore University Bangalore.

**2. Selection of variables:**

As the researcher is interested in eliciting the differences in the Dimensions of Temperament variables among the sportsmen and non-sportsmen of under graduation in Bangalore University the following variables of dimensions of Temperament as mentioned in

the scale designed by Sri Chada and miss Sunanda chandana is selected for the present study.

1. Sociability
2. Ascendance
3. Secretiveness
4. Reflective
5. Impulsivity
6. Placid
7. Accepting
8. Responsible
9. Vigorous
10. Co-operative
11. Persistence
12. Warmth
13. Aggressiveness
14. Tolerance and
15. Tough minded

**3. Orientation of the subjects:**

Researcher himself is Physical Education Director in Govt.First Grade College, Vemagal District Kolar of the Karnataka State from last six year. He is associated with sports and games activities in Bangalore University. He will visit the sportsmen along with his assistants at their colleges where they are studying and practice venues such as Sri Kanterava Stadium, Koramangala indoor stadium south SAI centre at Bangalore University, district stadiums and specific clubs and colleges on particular dates, which were previously decided on obtaining permission from the coaches of the selected sportsmen and the sportsmen themselves. To collect the required data from the non-sportsmen group also the researcher personally visiting the pre-determined colleges of all the Bangalore University. The researcher will explain each subject selected for the study about the nature and purpose of the study, the questionnaire selected for the study, its content and method to answer the questionnaire.

**4. Administering the questionnaire:**

After explaining everything about the questionnaire and its content the investigator will distribute the questionnaire and read out all the instructions and explain them to the subjects. Each and every question will be read out and explain so that the selected subjects / pupil could easily understand the same. As the subjects answered the questionnaire, the investigator will clarify all the doubts of the subjects whenever asked for.

**5. Standardization of collected data:**

The duly answered questionnaires will be collected back and scored as per the instructions in the respective manual. Each question will be classified under the relative variable and standardized as per the norms mentioned in the manual. The data obtained will be thus standardized for further statistical treatment.

**6. Statistical analysis and interpretations:**

The data standardized as per the norms in the manual will be subjected to following statistical analysis facilitating interpretations:

- Mean and standard deviation were found out for all the variables or dimensions of the temperament between both the groups of sportsmen and non-sportsmen.
- Significant differences in the dimensions of temperament were established between undergraduate sportsmen and non-sportsmen in Bangalore University as per the Z test.
- Significant difference will established at 0.05 level of significance as per the Z test.
- Interpretations will be drawn on the basis of the results obtained through the above mentioned statistical analysis and

various previous research establishments and present societal trends influencing the students.

**TIME SCHEDULE**

Almost primary level research has been started from January 2016.

**The research study will follow following time schedule.**

May 2016 Research Proposal submission.

June 2016 to Dec.2016 preparations for Chapter I st and visits to the Colleges affiliated to Bangalore University as well as sports centers for Primary data collection.

January 2017 to June 2017: Selection of the Subjects and preparation for questioner for data collection.

July 2017 to Dec. 2017: data collection by questioner.

Jan 2018 to March 2018: Data Analysis.

April 2018 to Jun 2018: Report writing, Synopsis Submission and preparation for Pre-Viva voce.

June 2018 Onwards Thesis submission.

# BIBILIOGRAPHY

Doug H. Han , Joo H. Kim , Young S. Lee , Soo Joeng Bae, Soo Jin Bae , Hyung J. Kim , Min Y. Sim , Young H. Sung and In Kyoon Lyoo ©Journal of Sports Science and Medicine (2006) 5, 381-389.

Joanna Burdzicka Etal.... Original research papers Pol. J. Sport Tourism DOI: 10.2478/pjst-00012014, 2014 21, 3-7

Marjorie Bernier, Emilie Thienot, Romain Codron, and Jean F. Fournier Journal of Clinical Sports Psychology, Human Kinetics, Inc. 2009, 4, 320-333

V.P. Gupta and U.S. Bangal, "Extroversion, Neuroticism and Physical Fitness", A Half Yearly Journal, 21:2, (1976), Pp. 58-63.

Barinder, "A study of General Anxiety and Test Anxiety with Reference to Environmental Factors and Extroversion – Introversion of Delhi Students", Fourth Survey of Research in Education 1983-88, Vol. I, (1991), p. 339.

Kenneth Tillman, "Relationship between Physical Fitness and Selected Personality Traits," Research Quarterly, 36:4, (1965), p.483.

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